



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

ARGEO PAUL CELLUCCI  
Governor

JANE SWIFT  
Lieutenant Governor

BOB DURAND  
Secretary

LAUREN A. LISS  
Commissioner

**RENEWAL OF CERTIFICATION FOR GENERAL USE**  
Pursuant to Title 5, 310 CMR 15.000

Name and Address of Applicant:

Smith & Loveless, Inc.  
14040 Santa Fe Trail Drive  
Lenexa, KS 66215

Trade name of technology and model numbers: Modular FAST as manufactured by Smith & Loveless, Inc. (hereinafter the "System").

Transmittal Number: W 018123  
Date of Issuance: 6/14/01  
Expiration date: 6/14/06

**Authority for Issuance**

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental Protection hereby issues this Certification for General Use to: Smith & Loveless, Inc., 14040 Santa Fe Trail Drive, Lenexa, KS 66215 (hereinafter "the Company"), certifying for General Use in the Commonwealth of Massachusetts of the System described herein. Sale and use of the System are conditioned on and subject to compliance by the Company and the System owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Certification constitutes a violation of 310 CMR 15.000.

---

Glenn Haas, Acting Assistant Commissioner  
Bureau of Resource Protection  
Department of Environmental Protection

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

DEP on the World Wide Web: <http://www.state.ma.us/dep>

Printed on Recycled Paper

## **I. Purpose**

1. The purpose of this Certification is to allow the use of the System in Massachusetts on a General Use basis.
2. With the necessary permits and approvals required by 310 CMR 15.000, this Certification authorizes the installation and use of the System in Massachusetts.
3. The System may be installed on all facilities where a system in compliance with 310 CMR 15.000 exists on site or could be built and for which a site evaluation in compliance with 310 CMR 15.000 has been approved by the local approving authority; or by DEP if DEP approval is required by 310 CMR 15.000.

## **II. Design Standards**

1. The System shall be installed in series between the septic tank and the soil absorption system (SAS) of a standard Title 5 system in a manner which neither intrudes on, replaces a component of, or adversely affects the operation of a Title 5 system as constructed in accordance with 310 CMR 15.100 through 15.279, subject to the provisions of this Certification.
2. The System, a fixed film aeration treatment process, is an aerobic, fixed film process in which the media is 100-percent submerged. In the submerged application, the aeration and mixing are provided by an air lift mechanism. In the center of the System is a draft tube, which extends through the media. Air is pumped into the draft tube by a compressor, which results in the wastewater being pumped from below the media to the top of the submerged media.  
  
The pumped liquid hits the splash plate, which directs the wastewater across the top of the submerged media. The splash plate also creates the break-up of the wastewater into droplets to increase the surface area of the liquid to enhance the aeration of the wastewater.  
  
The oxygenated wastewater then passes down through the media where the bacterial activity takes place. The System uses both fixed film and suspended bacteria in the degradation of the organic material.
3. The System is designed such that plastic modular inserts are installed in an appropriately sized precast or cast-in-place concrete tank. The inserts are constructed of PVC or high density polyethylene plastic in modular units with the number of units and the tank size governed by the wastewater design flow and characteristics.
4. The system is designed to provide volume in the tank beneath the media to provide sludge storage of excess solids, which slough off the media. The sludge storage zone must be pumped periodically based on sludge accumulation. Prior to or at the time the excess sludge is being removed, the air scour system should be activated to loosen and remove solids attached to the media. The removed solids will settle to the bottom of the tank and be removed with the sludge.

**II. General Conditions**

1. The provisions of 310 CMR 15.000 are applicable to the use of this System, except those that specifically have been varied by the terms of this Certification.
2. Any required operation and maintenance, monitoring and testing shall be performed in accordance with a Department approved plan. Any required sample analysis shall be conducted by an independent U.S. EPA or DEP approved testing laboratory, or a DEP approved independent university laboratory, unless otherwise provided in the Department's written approval. It shall be a violation of this Certification to falsify any data collected pursuant to an approved testing plan, to omit any required data or to fail to submit any report required by such plan.
3. The facility served by the System and the System itself, shall be open to inspection and sampling by the Department and the local approving authority at all reasonable times.
4. In accordance with applicable law, the Department and the local approving authority may require the owner of the System to cease operation of the system and/or to take any other action as it deems necessary to protect public health, safety, welfare or the environment.
5. The Department has not determined that the performance of the System will provide a level of protection to public health and safety and the environment that is at least equivalent to that of a sewer. Accordingly, no System shall be upgraded or expanded, if it is feasible to connect the facility to a sanitary sewer, unless as allowed by 310 CMR 15.004.
6. Design and installation and use of the System shall be in strict conformance with the Company's DEP approved plans and specifications and 310 CMR 15.000, subject to this Certification.

**IV. Conditions Applicable to the System Owner**

1. The System is certified in connection with the discharge of sanitary wastewater only. Any non-sanitary wastewater generated or used at the facility served by the System shall not be introduced into the System and shall be lawfully disposed of.
2. Operation and Maintenance agreement:
  - i. Throughout its life, the System shall be under an operation and maintenance (O&M) agreement. No O&M agreement shall be for less than one year.
  - ii. No System shall be used until an O&M agreement is submitted to the local approving authority which:
    - provides for the contracting of a person or firm competent in providing services consistent with the System's specifications and

the operation and maintenance requirements specified by the designer and any specified by the Department;

- contains procedures for notification to the Department and the local board of health within five days of a System failure or alarm event and for corrective measures to be taken immediately;
  - provides the name of an operator, which must be a Massachusetts certified operator if one is required by 257 CMR 2.00, that will operate and monitor the System. The operator must operate and maintain the System at least every three months and anytime there is an alarm event.
3. The owner of the System shall at all times have the System properly operated and maintained in accordance with the Company's and the designer's operation and maintenance requirements and this Certification.
  4. The owner of the System shall provide a copy of this Certification, prior to the signing of a purchase and sale agreement for the facility served by the System or any portion thereof, to the proposed new owner.
  5. The owner shall furnish the Department any information that the Department requests regarding the System, within 21 days of the date of receipt of that request.

**V. Conditions Applicable to the Company**

1. By January 31<sup>st</sup> of each year, the Company shall submit to the Department, a report, signed by a corporate officer, general partner or Company owner that contains information on the System for the previous calendar year. The report shall state: the number of units of the System sold for use in Massachusetts during the previous year; the address of each installed System, the owner's name and address, the type of use (e.g. residential, commercial, school, institutional) and the design flow; and for all systems installed since the first issuance of Certification for the System, all known failures, malfunctions, and corrective actions taken and the address of each such event.
2. The Company shall notify the Director of the Watershed Permitting Program at least 30 days in advance of the proposed transfer of ownership of the technology for which this Certification is issued. Said notification shall include the name and address of the proposed new owner and a written agreement between the existing and proposed new owner containing a specific date for transfer of ownership, responsibility, coverage and liability between them. All provisions of this Certification applicable to the Company shall be applicable to successors and assigns of the Company, unless the Department determines otherwise.

3. The Company shall furnish the Department any information that the Department requests regarding the System, within 21 days of the date of receipt of that request.
4. Prior to its sale of the System, the Company shall provide the purchaser with a copy of this Certification. In any contract for distribution or sale of the System, the Company shall require the distributor or seller to provide the purchaser of the System, prior to any sale of the System, with a copy of this Certification.
5. If the Company wishes to continue this Certification after its expiration date, the Company shall apply for and obtain a renewal of this Certification. The Company shall submit a renewal application at least 180 days before the expiration date of this Certification, unless written permission for a later date has been granted in writing by the Department.

#### **VI. Reporting**

1. All notices and documents required to be submitted to the Department by this Certification shall be submitted to:

Director,  
Watershed Permitting Program  
Department of Environmental Protection  
One Winter Street - 6th floor  
Boston, Massachusetts 02108

#### **VII. Rights of the Department**

1. The Department may suspend, modify or revoke this Certification for cause, including, but not limited to, non-compliance with the terms of this Certification, non-payment of the annual compliance assurance fee, for obtaining the Certification by misrepresentation or failure to disclose fully all relevant facts or any change in or discovery of conditions that would constitute grounds for discontinuance of the Certification, or as necessary for the protection of public health, safety, welfare or the environment, and as authorized by applicable law. The Department reserves its rights to take any enforcement action authorized by law with respect to this Certification and/or the System against the owner or operator of the System and/or the Company.

#### **VIII. Expiration Date**

1. Notwithstanding the expiration date of this Certification, any System sold and installed prior to the expiration date of this Certification, and approved, installed and maintained in compliance with this Certification (as it may be modified) and 310 CMR 15.000, may remain in use unless the Department, the local approval authority, or a court requires the System to be modified or removed, or requires discharges to the System to cease.